National Aeronautics and Space Administration

Lyndon B. Johnson Space Center
Houston, Texas

Orbital debris

JSC scientists influence international change to protect low-Earth orbit. Story on Page 3.

total health

No bones about it

JSC's orthopedic surgeon will talk about osteoporosis today in Bldg. 30. Story on Page 4.

Space News Roundup

Vol. 36 **March 21, 1997** No. 12

Roundup changes to embrace contractors, community

JSC's Space News Roundup will take the next step in its evolution April 11 when it returns to an every-other-week delivery schedule and broadens its focus to include more employee, contractor and community news.

The Roundup will take a one-week hiatus, with no paper being printed April 4, then return April 11 as an eight-page publication sporting a "new" nameplate. The new banner actually is the original, first chosen by an employee contest and published in 1961.

"Improved teamwork is essential if we are to accomplish our goals efficiently and effectively," said JSC Director George Abbey. "By adjusting the focus of the center's official newspaper, we can encourage a stronger spirit of community among all of our employees—civil servants and contractors alike—and we can extend that spirit to our neighbors in the greater Houston area."

Public Affairs Director Doug Ward said the change also recognizes significant technical developments in the area of electronic communication.

"When we increased the publication frequency in 1988, the Roundup was one of the primary vehicles for communicating program and project news to our employees," Ward said. "With the advent of phone mail distribution lists, electronic mail and the Internet, it is much easier to spread the word about breaking news than it was 10 years ago. The changes we are making should allow us to provide added depth in the coverage of activities at JSC and to focus on the individual and group accomplishments that provide the foundation for program success."

Ward said he will be forming a JSC editorial board to advise him on Roundup content and to assist in formulating editorial policy. Ward initially will include representatives of Human Resources, Mission Operations, Engineering, Shuttle and Station Programs and Center Operations. Other organizations will be asked to fill rotating assignments.

The Public Affairs Office will continue to keep employees up-to-date on breaking space program news by way of the Daily Cyber Space Roundup, which is offered online via the Internet, Ward said.

The Roundup staff will be on the lookout for inputs from a variety of sources to fill the eight-page paper, said Editor Kelly Humphries. In particular, the paper's staff will be in constant contact with newspaper staffs at the center's prime contractors so that it may share information about their activities with the center.

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JSC Photo 97-03461 by Mark Sowa

Four volunteers greet family, friends and dignitaries after spending 60 days in an air-tight chamber, breathing recycled air and drinking recycled water. The Phase IIA-International Space Station Life Support Test crew emerged last Friday from the chamber in Bldg. 7 after breaking a 25-year-old record set in support of America's first space station. The new mark surpasses the old record of 56 days held by Skylab astronauts in 1972. From left are, Team Lead Terry Tri, Facilities Project Engineer Dave Staat, Systems Engineer Fred Smith and Project Engineer Karen Meyers. Applauding them at far right is JSC Director George Abbey.

Chamber crew breaks 25-year duration record

By Karen Schmidt

Four volunteers emerged last Friday from an air-tight chamber in Bldg. 7 after breaking a 25-year-old record set in support of America's first space station.

Team Lead Terry Tri, Project Engineer Karen Meyers, Systems Engineer Fred Smith and Facilities Project Engineer Dave Staat unlocked the sealed chamber at 10 a.m. Feb. 14 and were greeted by family, friends and dignitaries—plus the astronauts who held the previous record.

"I feel like we are all going in the right direction and it was fantastic to be part of it all," Tri said. "I want to thank all the extended folks out there that made this happen. It wasn't just us by any stretch of the imagination, it was a huge effort by scores of people."

The new chamber record of 60 days surpasses the old record of 56 days held by Skylab astronauts Bill Thornton, Karol Bobko and Bob Crippen. They entered the chamber July 26, 1972, to begin the Skylab Medical Experiments Altitude Test and were released September 20, 1972. None flew on Skylab, but all did fly on the shuttle. Thornton and Bobko were on hand to congratulate the new record holders.

"It's 25 years later but some things never change," Thornton said. "Getting a successful flight off starts right here. If space station and Mars flights are to be successful this is an essential part of it."

The four volunteers spent 60 days in the air-tight chamber as part of the Phase IIA-International Space Station Life Support Test. The crew entered the three-story 20-foot diameter chamber on Jan. 13 and spent their time investigating the use of mechanical and chemical means to recycle all air and water, including urine. These physicochemical air and water processors are of the same type that will be used on the International Space Station.

Each volunteer agreed that a team effort was essential in completing all the objectives of the test. If not for their fellow crew mates and support personnel, they said, the test would not have been such a success.

"This has been the most incredible experience of my life," Meyers said. "As the medical experiments coordinator, we successfully completed all of our demonstration projects during this test. It is important to obtain meaningful science in an environment like this, especially as we move toward assembly of the International Space Station and beyond."

Smith and Staat said the test should help keep the dream of returning to the Moon and Mars alive.

"It's been a ride and a great experience," Smith said. "Words

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Anniversary marks milestone of American presence on Mir

Saturday marks the one-year anniversary of a continuous U.S. presence in space.

The year began with the launch of STS-76 to the Russian Mir Space Station leaving Astronaut Shannon Lucid and continues today with current resident Jerry Linenger.

Since Lucid arrived on Mir, astronauts John Blaha and Linenger have followed in her footsteps, conducting continuous scientific experiments aboard the Russian complex as a precursor to the development and occupancy of the International Space Station.

Linenger will remain aboard Mir until mid-May, when he will be replaced by astronaut Mike Foale, who, in turn, will be replaced in September by astronaut Wendy Lawrence. The final U.S. astronaut scheduled for a tour of duty on the Mir is David Wolf in early 1998.

Former astronaut Norm Thagard was the first U.S. astronaut to live and work on Mir. Thagard spent four months on the Russian outpost in 1995. Lucid spent a U.S.-record 188 days in space from the time of her launch on March 22, 1996, to her return to Earth on STS-79 on Sept. 26, 1996. Blaha, who arrived on the STS-79 mission on Sept. 16 last year, spent 128 days in space, returning to Earth aboard *Atlantis* at the completion of STS-81 on Jan. 22. Linenger was launched on the STS-81 mission on Jan. 12.

As the anniversary passes, the Mir 23 crew stayed focused on sci-

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NASA technology to help 'soak up' potentially dangerous chemical spills

By Audrey Schwartz

Almost as easily as a paper towel wipes away spilled milk, a layered, pillow-like absorbent pad developed at NASA's White Sands Test Facility may absorb and neutralize toxic and non-toxic chemical spills.

Under a Space Act Agreement signed last week between JSC and New Mexico Highlands University, the university will improve the pad's versatility to contain, neutralize and clean up a variety of potentially dangerous chemical spills. The pad initially was designed to absorb any hydrazine spilled from spacecraft engines during the space shuttle tanking process.

The pad's absorbent interior containing chemically reactive agents counteracts the dangerous chemicals within the spill. The chemical reagents are selected to neutralize specific toxic, acidic or caustic spills. Once the chemical is neutralized, the pad is ready for disposal. Assembled in a "cut-and-sew" process, the pads can be easily made to whatever size a clean-up job requires.

Through the Space Act Agreement, New Mexico Highland University will incorporate enhancements to increase absorption speed, improve reliability and improve toxic reactive agent effectiveness. In addition, the university will identify research needed to make the pads safe in environmental protection applications as well as develop a testing plan for the prototype.

JSC will provide limited engineering data, technical facilities for testing and technology transfer assistance. The resulting technology will be used by NASA programs and others where containment of hazardous liquids is necessary.

JSC Photo by Robert Markowitz

Kent Hargett, who along with Mike Markin makes up the Irish group Godfrey's Rangers, entertains the lunch crowd with his penny-whistle in the Bldg. 3 cafeteria as part of the St. Patrick's Day celebrations at JSC.

Volunteer help needed for exhibit

Baybrook Mall is sponsoring a NASA/JSC/Moody Gardens Exhibit during April and May and volunteers are needed to staff the exhibit.

The Space Station module mockup will require staffing April 12-23. Mall hours are 10 a.m.-9 p.m. Monday-Saturday, and noon-6 p.m. Sundays. Employees may volunteer for one six-hour shift or more. This time will count toward the employee's 40-hour work week.

A training session will be available Friday, April 11 at Baybrook Mall to give employees the opportunity to make this project interesting, informative and enjoyable. To volunteer, contact Jean Womack, at x34618.